Welcome to the Biweekly Restoration Information Update Page. This web site

- Provides current information on wetland and river corridor restoration projects
- Recognizes outstanding restoration projects
- Provides a forum for information sharing

We welcome the submission of articles and announcements related to your restoration project. Just send your write-up to EPA's contractor at restorationupdate@tetratech-ffx.com or mail it to Kathryn Phillips, Biweekly Restoration Update Coordinator, Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030. We will carefully consider your submission for inclusion in a future update. If your submission is selected, please note that it might be edited for length or style before being posted. Because this web site is meant to be a public forum on restoration information, we cannot post any information that is copyrighted or information that serves or has the appearance to serve as advocating or lobbying for any political, business, or commercial purposes.

Contents

Feature Article

Community Action and Some Good Fortune Have Restored Burd Run Burd Run is on its way to recovery, according to the article Comprehensive Riparian Restoration Along Burd Run, by Christopher J. Woltemade, Ph. D. & Alan Wood, P.E., published in the March/April 2002 issue of Land and Water (http://www.landandwater.com/features/vol46no2/vol46no2_1.html). Burd Run received new life when Shippensburg Township bought it in 1999 for use as a township park. The former owners of this 21-acre property in Shippensburg, Pennsylvania had used it for pastureland and modified the riparian area to better meet their needs. Before 1937 (the date of the earliest aerial photograph) the site had undergone the following modifications: straightening of the stream channel, ditching and draining of an adjacent wetland, and removal of native streambank vegetation.
The modified riparian area, lacking the natural stream meanders that slow water velocity and the native vegetation that stabilizes banks, was highly susceptible to erosion. The stream also suffered from increased pollutant loads resulting from the removal of the wetland that had once

filtered nutrients from runoff before it entered the stream. A 2001 site assessment documented the problems and attributed the water quality degradation to accelerated bank erosion and nonpoint sources of nutrients.

Developing Goals and Gaining Support

Faculty and students from Shippensburg University initiated the restoration project. They developed the initial goals for the project, including reducing bank erosion, enhancing channel morphologic diversity, lowering nutrient concentrations, and providing opportunities for environmental education. The University then used these goals to build a coalition of more than 20 project partners to support the restoration effort. The project partners included the Cumberland County Conservation District, Shippensburg Township (which had recently purchased the land), and numerous federal agencies, interstate organizations, state agencies, environmental organizations, local municipalities, and school districts.

Once funding was secured, in the form of a Pennsylvania Growing Greener grant, the Coalition developed specific project goals. The goals included relocating the stream to a meandering course, planting a forested riparian buffer, restoring the retention in a spring-fed floodplain wetland, and creating a site that would promote future environmental education efforts.

A Two-Phased Approach

The Coalition completed the construction portion of the restoration in two phases. Phase 1 took place over a 2-week period in October 2001. The construction team excavated the new meandering channel, installed in-stream habitat structures, and used riprap and rock where necessary to serve as erosion controls at key sites. They also planted more than 1,000 live stakes along the riparian corridor to further stabilize the bank. Construction in phase 1 also included redesigning the wetland to provide greater retention of water discharging from an on-site spring. To accomplish this, the construction team excavated a earthen berm to block the drainage ditch and installed a variable-flow control structure that allows water levels to be controlled in 6-inch increments. The berm was then seeded with a wetland mix and covered with biotextile for stabilization.

The first phase of the construction project was facilitated by some unexpected good fortune. Construction of the new stream channel revealed sand, gravel, and cobble deposits left by former meanders in the stream. These materials were reused to create riffles in the newly constructed stream channel and substantially reduced materials costs. In addition, 2001 proved to be the driest year in 68 years. The lack of precipitation allowed the use of heavy equipment in the spring-fed wetland areas, which, despite the drier conditions, still proved to be too moist to support some equipment.

The Coalition completed the second phase of construction in spring 2002. The final cut was made to divert water from the existing channel into the new meandering channel. Once the stream was diverted, the excavated material displaced by the creation of the new stream channel was used to fill the straight stream reach. Volunteers also gathered to plant an 80-foot-wide stream buffer with native and shrub species that will provide bank protection as well as wildlife habitat, shade, and aquatic nutrient uptake.

The two-phase approach was beneficial in many ways. The design took advantage of drier conditions in the fall, which facilitated construction and allowed vegetation along the streambank to become established before flowing water was introduced to the channel. Established vegetation is helpful along excavated areas because it reduces the risk of bank failure immediately following construction.

Final Steps

The next step in the project is to design the environmental education component of the project. The stream protection measures and exhibit riparian forest were both designed to demonstrate a diversity of best management practices and a wide range of native species. The water control structure installed in the restored wetland also allows for the possibility of adaptive wetland management demonstrations. Community groups are currently designing an interpretive nature trail to be established this summer. Local elementary, middle, and high school teachers also will be given the opportunity to attend a training workshop on field study possibilities available at the site. To read the complete article from the March/April issue of Land and Water, visit http://www.landandwater.com/features/vol46no2/vol46no2_1.html. For more information on the Burd Run restoration, contact Dr. Christopher J. Woltemade, Department of Geography-Earth

Science, Shippensburg University, 1871 Old Main Drive, Shippensburg, PA 17257. Phone: (717) 477-1143; e-mail: cjwold@ship.edu; Internet: www.ship.edu/~cjwolt.
If you'd like your project to appear as our next Featured Article, e-mail a short description to restorationupdate@tetratech-ffx.com.

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Five-Star Restoration Projects Update

The goal of EPA's Five-Star Restoration Program is to bring together citizen groups, corporations, youth conservation corps, students, landowners, and government agencies to undertake projects that restore streambanks and wetlands. The program provides challenge grants, technical support, and peer information exchange to enable community-based restoration projects. A few Five-Star restoration projects are revisited here to see if the modest amount of funding (between $5,000 and $20,000) has helped the local restoration partners achieve their goals.

Project Title: Lake Pontchartrain Marsh Restoration
Five-Star Grant: $10,000
Grant to: Southeast Louisiana National Wildlife Refuges
Location: Lacombe, Louisiana
Project Date: 2000
Original Project Description:
St. Tammany Parish and the Southeast Louisiana National Wildlife Refuges will restore wetlands along the northern shores of Lake Pontchartrain in the second phase of a larger effort to stabilize the eroding shoreline of the lake. Other project partners include the Louisiana Department of Natural Resources, the Youth Challenge Program, and the Friends of Southeast Louisiana Refuges. The partners will revegetate 13 acres of coastal wetlands along the shoreline that were created during the first phase of the overall project. Local community volunteers, area youth, and environmental education groups will monitor the results of the project annually thereafter. The project will reduce shoreline erosion, improve water quality, and provide significant increases in submerged aquatic vegetation in the area. Funding for this grant is being provided by the Gulf of Mexico Program, which is a partnership underwritten by EPA and Lockheed Martin Corporation, whose employees will also participate in the restoration work.
Update:
Five-Star partners revegetated a 2-acre area formerly consisting of open water that is expected to protect the shoreline of Lake Pontchartrain from further erosion. The Five-Star project was undertaken on the site of a former Christmas Tree Project conducted through the Louisiana Department of Natural Resources. The Christmas Tree Project uses recycled Christmas trees to build barriers that dissipate wave energy, resulting in reduced shoreline erosion and increased sediment deposits. The accumulated sediment made it possible for Five-Star Project partners to revegetate the area with native plants.
The Five-Star grant allowed St. Tammany Parish and the Southeast Louisiana National Wildlife Refuges to jump-start the revegetation process. Five-Star funds were used to purchase more than 1,400 trade gallon containers of smooth cord grass. Americorps and Lockheed-Martin volunteers, with the help of staff from U.S. Fish and Wildlife, St. Tammany Parish, and Coastal Airboats, Inc., planted the cord grass in the sediment accumulated in the southeastern extreme of Barringer's Lagoon just east of Goose Point. The vegetation should stabilize the marsh area and prevent a breach in the Lake Pontchartrain shoreline an important preventive measure since shoreline breaches drastically alter the hydrology and salinity of marsh waters and are detrimental to marsh habitat.
In addition to the ecological benefits, this project educated volunteers about the wildlife habitat, storm protection, water quality, and food control benefits of marsh areas. The project team also learned valuable lessons that can be applicable to future marsh plantings, especially the need to control Nutria, an exotic, herbaceous rodent that enjoys feasting on new cord grass plantings. Louisiana parishes and the Southeast Louisiana National Wildlife Refuges will continue the effort to restore coastal marsh areas. Sites have already been selected for future Christmas Tree

Projects, and St. Tammany Parish and Southeast Louisiana National Wildlife Refuges hope to partner with the Five-Star Program in future revegetation projects. **[Update March 2002.]**

Project Title: Partnering with Nonprofits: Kohanaiki Anchialine Pond Restoration Project
Five-Star Grant: $5,000
Grant to: Kohanaiki 'Ohana
Location: Kailua-Kona, HI
Project Date: 1999
Original Project Description:
Kohanaiki 'Ohana will restore ecologically and culturally significant anchialine ponds (brackish water) on the Kona Coast of the Island of Hawaii. The project will be implemented in partnership with students from the West Hawaii Explorations Academy, Hawaii County officials, and local citizen and business volunteers. Stewardship of the anchialine pond wetlands is critical to the sustainable management of the island environment.
Update:
Kohanaiki is an area of natural and cultural significance in Hawaii County. The 450-acre undeveloped tract, Kohanaiki, contains a rare anchialine (brackish water) pond and wetland system and serves as an important site for cultural heritage located on the Kona Coast of the Island of Hawaii. The anchialine ponds and wetlands at Kohanaiki are an integral part of an extensive aquaculture system connected to the great walled fishpond at Kaloko Honokohau. The wetlands are home to several species of opae (shrimp), including the endangered opae'ula (red shrimp). The anchialine ponds are important to the ecology of the coral reef, as well as to the offshore fishing, subsistence, and gathering practices of Native Hawaiians. The area is currently open for public recreation and is heavily used, by residents and visitors alike, for swimming, surfing, camping, fishing, hiking, and harvesting shrimp from the ponds. As a result of the heavy traffic, the fragile ecosystem is threatened in many ways, including introduction of foreign plant and animal species and human waste.
Kohanaiki 'Ohana teamed with the County of Hawaii, the local community, students, and scientists in this project to restore the anchialine pond and wetland system. This project is part of a larger effort spearheaded by Kohanaiki 'Ohana to restore and protect undeveloped lands.
The project recruited students from the West Hawaii Explorations Academy (WHEA) to take part in the anchialine pond restoration. Students completed all aspects of restoration work. With the help of local scientists, biologists, and cultural experts, the team of 15 students researched, developed, and implemented strategies for restoration.
Students focused their restoration efforts on the largest of the three ponds, which was in danger of being choked by exotic pickleweed. The pickleweed was preventing growth of native makalowa reed and other plant species on which local aquatic life and birds depend. Students and partners successfully removed 90 percent of the encroaching pickleweed from the pond and its perimeter. Students also helped educate the community on the restoration project through site presentations to other schools and posterboard displays at environmental fairs and fundraisers. They wrote school reports and articles for the Kohanaiki 'Ohana newsletter. The students learned to work as a team to survey and plan the project stages and goals. The project helped restore the pond system, and it provided valuable education for students and the community.
The project received the Governor's "Keep Hawaii Beautiful" award. The Kohanaiki 'Ohana plans to continue their work to protect the ponds and wetlands along the coastal area of Hawaii Island. **[Updated September 2001.]**

Project Title: Dover Greenway
Five Star Grant: $13,500
Grant to: Urban Conservation Action Partners, Inc.
Location: Dover, New Jersey
Grant Year: 1999
Original Project Description:
In Dover, New Jersey, Urban Conservation Action Partners, Inc., has brought together a group of diverse partners, including two Boy Scout troops, the U.S. Fish and Wildlife Service, the U.S. Department of Agriculture's Natural Resources Conservation Service, Friends of the Rockaway River, employees of Home Depot, and the Concerned Hispanic Political Action Committee, to

restore a 1,200-foot riparian buffer along the Rockaway River. The 40-mile-long river supplies the drinking water for more than 1 million people. The project will involve volunteers from many of the partner organizations in the hands-on restoration, as well as the long-term stewardship and educational activities that will accompany the restoration project.

Update:

The project continues to receive local support from special interest groups. The work accomplished by the partnership to date includes clearing an area to expand the length of an existing trail; removing invasive plants and planting native perennials along the riverbank; planting native trees and shrubs along the trail; and preparing and installing picnic benches and tables, trash receptacles, and fencing to delineate the site.

In 2000 Dover Greenway volunteers and supporters donated more than 60 volunteer days to the project; removed tons of debris, trash, railroad ties, downed trees, and exotic and invasive plants on more than 1,000 linear feet along the river; completed 1,000 linear feet of a wood chip trail, including an edging built with stones found on the site; planted more than 550 seedlings and shrubs and some 900 native perennials; and created fishing access in several additional locations along the riverbank.

The partners constructed a playground next to the Greenway that serves a neighborhood that previously had to cross a state highway to get to the nearest playground. **[Updated March 2002.]**

For more information on EPA's Five-Star grant program, visit http://www.epa.gov/owow/wetlands/restore/5star.

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Community-Based Restoration Partnerships

Long Island Soundkeeper, in cooperation with the New York Coastal Fishermen's Association and the New York City Department of Parks and Recreation, recently completed construction of a salt marsh at the southern boundary of Pelham Bay Park in the Bronx.

Soundkeeper staff led a team of restoration experts, Parks Department staff, and local volunteers to restore one-half acre of low marsh, high marsh, and brackish marsh ecosystem. The marsh is unusual because it contains three distinct marsh zones within a small area. It is also important because it lies adjacent to a highly urbanized neighborhood that has been cut off from the waterfront except for the access through this marsh to Pelham Bay Park. Even though this marsh has been affected by more than 300 years of human activity, it still persists.

The project team worked together to come up with an acceptable plan for restoration. Project directors hired Sven Hoeger of Creative Habitat, Inc., to develop a marsh restoration plan. Once the plan was completed, it was presented to the project team. The team then addressed comments from the New York City Department of Parks and Recreation and Community Board 10 in the Bronx before moving forward with the restoration. Soundkeeper oversaw the bidding process necessary to hire a contractor and chose CDM Associates of Verona, New York, to perform all excavation work.

The first priority in the restoration process was to eliminate the common reedgrass dominating the marsh. To accomplish this, CDM Associates excavated a 200-foot channel into the marsh which allowed salt water to flow in. As a result, the growth of common reedgrass, which does not respond well to high-salinity conditions, was halted. The area was replanted with native marsh species such as saltwater cordgrass, saltmeadow cordgrass, and switch grass.

Another goal of the restoration effort is to promote community stewardship of the marsh area through education. To accomplish this goal, project partners plan to place interpretive signs along the marsh, conduct community restoration workshops, and involve citizens in periodic- vegetation planting and debris clearing activities. The project partners also hope to improve public access to the area by constructing hiking and wildlife viewing areas. For more information, visit www.soundkeeper.org/updatedetail.asp?ID=9 or contact Long Island Soundkeeper, PO Box 4058, Norwalk, CT 06855. Phone: (203) 854-5330; toll free: (800) 933- SOUND; e-mail: info@soundkeeper.org.

Wetlands Reserve Program Makes Wetland Restoration Possible in Hawaii

The Natural Resources Conservation Service's (NRCS) Wetlands Reserve Program (WRP) and

private landowners are working together to restore wetland habitat in Hawaii. Recently, Sumner Erdman from Ulupalakua Ranch on Maui contacted Ducks Unlimited, Inc., and the NRCS with the hope of gaining the funding and technical expertise necessary to restore habitat areas for the nene goose, Hawaii's state bird. The two organizations agreed to work with Erdman, and soon Ducks Unlimited had completed a design for the ponds according to NRCS specifications. On June 18, 2001 construction began on the four ponds at Ulupalakua Ranch. By June 2001, the ponds, ranging in size from 0.09 acre to 0.32 acre were completed. In addition to funding pond construction, WRP funds were used to provide fencing to protect the new habitat areas. Ranch staff also contributed to the project by planting of native trees and shrubs.

Elsewhere in Hawaii, WRP partnerships continue to form. Umikoa Ranch, located on the big island, joined with NRCS to restore a complex of wetlands inhabited by endangered Koloa ducks. NRCS staff and funds helped to restore waterfowl habitat, reforest upland areas, and protect waterfowl populations through fencing and rat and mongoose control.

NRCS and Ducks Unlimited, are committed to restoring wetlands on private land in Hawaii. Between 1998 and 2001, NRCS allocated over $580,000 for restoring Hawaiian wetlands. This funding combined with matching funds from Ducks Unlimited and private landowners willingness to protect wetlands has resulted in more than $1 million worth of wetlands restoration projects.

For more information, visit www.hi.nrcs.usda.gov or contact Natural Resources Conservation Service, PO Box 50004, Honolulu, HI 96850. Phone: (808) 541-2600.

If you are part of an innovative community-based partnership that is working to restore river corridors or wetlands, we'd like to hear from you. Please send a short description of your partnership to restorationupdate@tetratech-ffx.com.

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Achieving Restoration Results

Marsh Restoration Work Completed on 1,500 Acres

This article was excerpted from the St. Johns River Water Management District's Spring 2002 Newsletter, *Stream Lines*.

Fifteen hundred acres of wetlands have been restored at the St. Johns River Water Management District's Orange Creek Restoration Area in Florida's southern Alachua and northern Marion counties. The final phase of restoration was completed in late 2001. This project was unique to the District, perhaps even to the state, in that virtually all man-made drainage features were removed, allowing for a more complete restoration of the former wetland and wildlife communities.

In the 1930s a canal was excavated through vast sawgrass marshes and wet prairies in the eastern portion of Orange Lake. This man-made channel, known locally as Orange Creek, became part of a levee and canal system that was constructed to convert 1,500 acres of marsh for agricultural purposes, primarily row crop production and cattle grazing.

Highlights of the restoration project included removing levees and canals, a distance of 174,000 feet involving 665,000 cubic yards of material, constructing 40 habitat islands, and planting 1,300 wetland trees and 40,000 cordgrass plugs. Other activities included constructing 1,000 feet of access road, relocating and removing 2 miles of powerline, and demolishing a bridge and replacing it with a pedestrian footbridge for public access.

In partnership with the U.S. Department of Agriculture's Natural Resource Conservation Service, the 3,415-acre property was acquired in 1998 to reduce agricultural discharge, to improve water quality, and to restore converted wetlands. The restoration project was funded through the Wetland Reserve Program, District sources, and wetland mitigation projects.

The property is now open to the public and established as a small-game hunting area with a developed campsite, a boat launch, and parking facilities. For more information about the St. Johns River Water Management District, visit http://sjr.state.fl.us/index.html . The newsletter in its entirety is available at http://sjr.state.fl.us/programs/outreach/pubs/streamln/02spring/sp02sln4.html .

Wetlands Created through National Oceanic and Atmospheric Administration's Damage Assessment and Restoration Program

The mission of the National Oceanic and Atmospheric Administration's Damage Assessment and Restoration Program is to restore coastal and ocean resources that have been injured by releases of oil or hazardous substances and to obtain compensation for the public for their losses. The restoration of 3 acres of coastal wetland habitat at the Middle Waterway Shore Restoration Project was completed under this program.

In the spring of 1995 Champion International Corporation, the former owner of the Simpson Tacoma Kraft Mill, and Simpson Tacoma Kraft Company, its current owner, initiated the Middle Waterway Shore Restoration Project. The project was developed in connection with a settlement approved in court on April 1, 1996, that resolved claims for natural resource damages in Commencement Bay against the two companies.

The Middle Waterway project reestablished over 3 acres of intertidal, salt marsh, and riparian habitat along the Middle Waterway, a high priority location for restoration in the Bay ecosystem. The waterway had one of the largest remaining areas of original intertidal mudflats in the Bay (about 20 acres). The Trustees excavated and contoured formerly filled land to create a natural shoreline with hummocks and other natural marsh features. The project increased the complexity, diversity, and habitat value of Middle Waterway for shore birds, salmonids, marine fish, river otters, and other wildlife in the area. The project also provides a partial buffer between the mudflats and adjacent upland industrial uses.

After a 5-year monitoring effort, and based on visual observations of planting performance and consultations with the public, contractors, and other technical staff, the Trustees initiated adaptive management procedures to improve the function of the site. They removed the top 2 feet of sand from portions of the site and replaced it with amended soil. They planted more varieties of native vegetation and anchored logs at predetermined locations to prevent erosion. These modifications to the project will now be monitored for success. For more information and to view pictures of the restoration's progress, visit www.darcnw.noaa.gov/midrst1.htm .

If you are part of an innovative restoration project that has had positive results, we'd like to hear from you. Please send a short description of your project to restorationupdate@tetratech-ffx.com.

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Funding for Restoration Projects

U.S. Fish and Wildlife Coastal Habitat Conservation Program

Funding and technical assistance for coastal and wetland restoration projects is available through the Coastal Habitat Conservation Program of the U.S. Fish and Wildlife Service (FWS). This program works to conserve healthy coastal habitats for the benefit of fish, wildlife, and people. The program forms cooperative partnerships designed to (1) protect coastal habitats through conservation easements and acquisitions; (2) restore coastal wetlands, uplands, and riparian areas; and (3) remove barriers to fish passage in coastal watersheds and estuaries. Program biologists provide restoration expertise and financial assistance to federal and state agencies, local and tribal governments, businesses, private landowners, and conservation organizations such as local land trusts and watershed councils. Proposals for all three types of partnerships are due to regional offices by June 8, 2002. For more information, visit www.fws.gov/cep/coastweb.html or contact the U.S. Fish and Wildlife Service, Branch of Habitat Restoration, 4401 North Fairfax Drive, Arlington, VA 22203. Phone: (703) 358-2201.

Funding Possibilities through Private Land Trusts

Private Land Trusts can assist landowners in acquiring land for wetland restoration projects. Land trusts are organizations that work specifically toward acquiring land for conservation purposes and often offer grants, technical assistance, and training to individuals and organizations working toward land conservation. The following are some national land trust organizations that might be interested in helping out with your wetland restoration project:

Trust for Public Lands
312 Massachusetts Avenue, NW
Washington, DC 20002
www.tpl.org .

Land Trust Alliance
900 17th Sreet, NW
Washington, DC 20002
www.lta.org
American Farmland Trust
1920 N Srteet NW
Washington, DC 20036
www.farmland.org

Using State Revolving Funds for Restoration

The Clean Water Act created the State Revolving Funds to provide a source of low-interest loans for water quality improvement projects. EPA awards grants to states to capitalize their Clean Water State Revolving Funds (CWSRFs). The states, through the CWSRF, make loans for high-priority water quality activities. As loan recipients make payments back into the fund, money is available for new loans to be issued to other recipients. Although traditionally used to build wastewater treatment facilities, loans are also used for other water quality management and source water protection activities, including stream corridor restoration and protection and shoreline erosion control. For more information, visit www.epa.gov/owm/finan.htm or contact U.S. Environmental Protection Agency, Office of Wastewater Management, SRF Branch, Municipal Support Division (4204) Ariel Rios Bldg., 1200 Pennsylvania Ave., NW, Washington, DC 20460. Phone: (202) 260-7360. Each state should also have a State Revolving Fund Office.

Please send any news you have on funding mechanisms available to local community organizations to restorationupdate@tetratech-ffx.com.

Achieving Restoration Results

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News and Announcements

EPA Celebrates American Wetlands Month

The nation will celebrate American Wetlands Month throughout May. This year's campaign will focus on protecting some of the nation's unique wetlands. EPA, the Izaak Walton League, and other federal and local agencies and nonprofit groups have scheduled activities around the country throughout the month. The calendar of nationwide events is located at http://www.iwla.org/sos/awm/events .

In the Washington, DC area, activities kick off with an EPA and U.S. Fish and Wildlife Agency 5-K run and 2-K walk on May 4 in Arlington, Virginia. Proceeds from the run and walk will help fund a local wetland restoration project. Additional activities are planned on the Mall in Washington, DC, including a National Park Service fair on May 3 4 and, a family fair at the U.S. Botanic Gardens on May 18.

National Wetland Award Winners

Seven outstanding wetlands educators, activists, scientists, and conservationists were selected as recipients of the 2002 National Wetlands Awards for their exemplary contributions to the conservation and restoration of the nation's wetlands. The award winners will be honored by the Environmental Law Institute, EPA, and other federal agencies at a ceremony on May 16, 2002, at the U.S. Botanic Garden on Capitol Hill.

The national Wetlands Awards program honors exceptional individuals who have demonstrated extraordinary effort, innovation, and excellence in wetland conservation through programs or projects at the regional, state, or local level. "We look forward to honoring these outstanding individuals who inspire others with their creativity and dedication to wetland conservation. ELI's National Wetlands Awards program helps to raise public awareness about the connection between healthy wetlands and healthy coastal ecosystems which give life to essential habitat for our nation's recreation and commercial fish, shellfish, and other living marine resources." said Bill Hogarth Assistant Administrator for Fisheries, National Marine Fisheries Service.

Program cosponsors the Environmental Law Institute, EPA, U.S. Department of Agriculture Forest Service, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and Natural Resources Conservation Service believe that rewarding these efforts helps ensure that future generations will have quality wetlands, biological diversity, and clean water.
This year's winners include:

- *Dr. Robert Hastings (Alabama) for Education and Outreach.*
- *Dr. William Patrick (Louisiana) for Science Research.*
- *Jim Sweeney (Indiana) for Volunteer Leadership.*
- *Jim King (California) and Clarence Mortenson (South Dakota) for Land Stewardship and Development.*
- *Christy Foote-Smith (Massachusetts) and K. Angel Pilago (Hawaii) for Outstanding Wetlands Program Development.*

To view the complete press release, visit www.eli.org/pdf/2002%20NWA%20Winners%20Announced.pdf.

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Upcoming Conferences and Events:
New Listings:
NRCS Wetlands Restoration and Enhancement Courses
Three offerings: May 20 24, June 3 7, and September 9 13, 2002
Various Locations
In this basic course in wetland restoration and enhancement, participants will learn to assess wetland functions, develop restoration and enhancement plans, and implement plans on degraded wetlands. The course emphasizes wetland ecology, wildlife needs, enhancement of wetland functions, design and implementation, and monitoring considerations. For more information, visit www.pwrc.usgs.gov/WLI/Training/restor02.htm .
Urban Wetlands Conference: Sustaining Multiple Functions
May 20-21, 2002
Portland, Oregon
This conference will explore how urban wetlands can be better designed and managed to serve overlapping and sometimes conflicting functions. Experts from around the country will speak about the hydrologic, ecological, and social forces that shape urban wetlands and will discuss how to better protect, preserve, and maintain these wetlands. For more information, visit http://cwest.orst.edu/wetlands/conference/index.htm.
2002 Water Stewardship Conference
September 5-7, 2002
Athens, Georgia
This conference, hosted by the Georgia Stream Buffer Initiative, is designed to provide tools and opportunities for active participation and cooperative efforts in water quality improvement projects. This conference is geared toward landowners interested in learning the value of water resources and how to restore and protect them, agency personnel who wish to learn techniques for establishing water protection programs in their area, watershed groups and citizens concerned with protection and enhancement of water quality, and research-oriented persons involved with water quality. Abstracts for presentations are being accepted until May 31, 2002. For more information visit http://www.gabuffers.org/events/2002_water_stewardship_conference.htm.

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PREVIOUS LISTINGS
Water Quality Monitoring in 2002: Building a Framework for the Future. The Third National Water Monitoring Conference
May 20-23, 2002
Madison, Wisconsin
This conference is designed to foster interaction, information sharing, and innovation among colleagues involved in all aspects of water monitoring. The conference is sponsored by the

National Water Quality Monitoring Council, in conjunction with many of its member organizations. For more information, visit www.nwqmc.org or e-mail dan@nwqmc.org.

Converging Currents: Science, Policy, and Culture at the Coast
May 19-22, 2002
Galveston, Texas

The Coastal Society's 18th International Conference will explore interrelationships among the physical, ecological, cultural, and political currents that converge at our nation's coast. To examine these interrelationships, the conference will have three subthemes: Coastal Watersheds and Estuaries Exploring the Vital Link Between Land and Water; Ecosystem Perspectives at the Regional Scale the Gulf of Mexico Case Study; and National Treasures and the International Commons Ocean Resources in the 21st Century. For more information visit www.thecoastalsociety.org/tcs18 or e-mail coastalsoc@aol.com.

Summer Institute in Coastal Management 2002
May 27 - June 21, 2002
Narragansett, Rhode Island

This month-long, intensive training is available to coastal management professionals. It will be conducted by the Coastal Resources Center (CRC) at the University of Rhode Island. Participants will learn tools and techniques to help them successfully handle the multifaceted challenges found when dealing with coastal areas. For more information visit http://crc.uri.edu/train/SI2002_app.html or contact Coastal Resources Center, Narragansett Bay Campus, University of Rhode Island, Narragansett, RI 02882. Phone: (401) 874-6224; e-mail: communications@crc.uri.edu.

To post your restoration news and announcements, please send information to restorationupdate@tetratech-ffx.com.

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Restoration-Related Web Sites

www.harborestuary.org

> ***New York-New Jersey Harbor Estuary Program.*** *The Harbor Estuary Program (HEP) is a National Estuary Program authorized by EPA in 1987. The program is a multiyear effort to develop and implement a plan to protect, conserve, and restore the estuary. The web site contains links to HEP publications and a database of Long Island Sound regional data, including habitat and living resources, monitoring, land use management, public participation and education, toxics, and water use data. This site would be useful for anyone seeking monitoring data for this estuary or information on the steps currently being taken to protect it.*

www.hudsonriver.org

> ***The Hudson River Foundation for Science and Environmental Research.*** *The purpose of the Foundation is to bring science into the decision-making process about the Hudson River. The Foundation supports river-related scientific research and facilitates the communication of this research to the scientific community, policy makers, and the public. This site contains links to scientific reports related to the Hudson River, and the Foundation offers grants to support scientific research.*

http://chicagowildernessmag.org

> ***Chicago Wilderness*** *is an alliance of 143 public and private organizations working together to study, restore, protect, and manage the natural resources of the Chicago region. The alliance publishes a quarterly magazine that highlights the natural heritage of the region and shares stories about the people and organizations working to protect and restore local nature. Restoration stories*

highlighted in the magazine include the protection and restoration of the Calumet wetlands, the restoration of the Nippersink River. The magazine available through this site offers some encouraging restoration-related stories.

www.minnehahacreek.org

Minnehaha Creek Watershed District. *The Minnehaha Creek Watershed District is the regional governmental unit chiefly responsible for protecting the water resources of the Minnehaha Creek watershed, located in the Minneapolis area of Minnesota. The web site provides information about current efforts to restore the creek and surrounding wetlands and also has links to permit information and applications. This web site would be useful for anyone interested in undertaking a restoration effort along Minnehaha Creek or seeking information on current successful restoration projects.*

www.watershed.cboss.com/index.asp

Alliance for Watershed Action and Riparian Easements (AWARE). *AWARE is an Ohio- based alliance educates the public about watersheds and the need for watershed protection. The alliance also sponsors watershed cleanup and restoration efforts. This site provides good information on the importance of maintaining clean watersheds and offers suggestions on how homeowners, municipalities, and the mining, forestry, and agriculture industries can prevent watershed pollution.*

http://aquat1.ifas.ufl.edu/database.html

Aquatic, Wetland, and Invasive Plant Database. *The University of Florida maintains a computerized bibliographic database devoted to freshwater aquatic and wetland plants, as well as terrestrial and aquatic invasive plants. The database includes citations for more than 55,000 research articles, books, and reports about aquatic plant ecology, physiology, use, and control. Methods for obtaining the referenced materials are also contained in this site. This site would be useful for identifying wetland plants for use in restoration projects.*

www.treelink.org/woodnotes/vol1/no1/rrres.htm

Riparian Restoration Roundtable: Resources*. This site provides links to numerous riparian restoration-related fact sheets, research materials, planning documents, and organizations. This web site would be useful to anyone seeking information on the importance of riparian areas.*

http://midwest.fws.gov/Morris/

Morris Wetland Management District. *The Morris Wetland Management District is a land management office of the U.S. Fish and Wildlife Service established to preserve and protect habitat critical to waterfowl and other prairie wildlife. The district manages 244 separate parcels (more than 50,000 acres) of federally owned land, oversees more than 20,000 acres of privately owned wetlands, and coordinates a program to restore wildlife habitat on private property. This site provides a history of the prairie pothole region and wetland maps of protected lands. It is a resource for anyone working to preserve wetlands in western Minnesota.*

www.dnr.state.mn.us/waters

Minnesota Department of Natural Resources (DNR) Waters Page. *This page has links to both the wetlands page (with information on wetland history, function, permitting needs, and restoration assistance) and the rivers and streams page (with information on hydrology, flooding, and river restoration an protection). This site provides general information on the importance of healthy rivers, streams, and wetlands and contains links to restoration resources.*

www.mwhf.org

Michigan Wildlife Habitat Foundation. *The Michigan Wildlife Habitat Foundation, established in 1982, is a nonprofit, membership organization that restores and improves wildlife habitat through cost-effective projects. The habitat page provides information on the importance of a variety of natural habitats and gives a summary of techniques used to restore them. This web site would be useful to anyone seeking basic information about wetland and riparian restoration techniques or looking for encouraging stories about restoration projects.*

www.unl.edu/nac/aboutnac.html

National Agroforestry Center (NAC)*. NAC conducts research on how to design and install forested buffers to protect water quality, and it develops and delivers technology on a broad suite of agroforestry practices to natural resource professionals who directly assist landowners and communities. The site describes agroforestry practices, provides on-line agroforestry-related publications, and offers links to diverse riparian buffer and agroforestry resources. This site would be useful for anyone interested in the economic returns that can be provided by forested buffers.*

Let us know about your restoration-related web site. Please send relevant URLs to restorationupdate@tetratech-ffx.com.

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Information Resources

Three Estuary Posters available highlighting Estuary Species and Restoration Projects
The New York-New Jersey Harbor estuary has announced the availability of three new estuary posters.

- ***Estuaries:*** *Scenes of Transition is a poster with beautiful artwork depicting more than 50 estuarine species found throughout the U.S. Species key is included with the poster.*
- ***Priority Acquisition & Restoration Sites*** *is a map that identifies the locations of more than 150 sites for acquisition and restoration within the NY-NJ Harbor Estuary. This map was compiled by the Harbor Estuary Program Habitat Work Group.*
- ***Wildlife of the Harbor's Newark Bay Complex*** *depicts birds, fish, mammals, plants, and other wildlife that make the New York-New Jersey Harbor Estuary their home. This poster was produced by New Jersey Department of Environmental Protection.*

To request copies of these posters, visit www.harborestuary.org and click on the comment form.
Riparian Buffers for the Connecticut River Watershed
by the Connecticut River Joint Commissions (2000)

The Connecticut River Joint Commissions have developed 10 riparian buffer fact sheets to help landowners in the Connecticut River Watershed understand and implement riparian buffers. These fact sheets, available on-line at http://www.crjc.org/riparianbuffers.htm, include:

No.1 Introduction to Riparian Buffers
No.2 Backyard Buffers
No.3 Forestland Buffers
No.4 Buffers for Habitat
No.5 Buffers for Agricultural Land
No.6 Urban Buffers
No.7 Guidance for Communities
No.8 Planting Riparian Buffers (& plant list)
No.9 Field Assessment
No.10 Sources of Assistance

If you'd like to publicize the availability of relevant information resources, please send information to restorationupdate@tetratech-ffx.com.